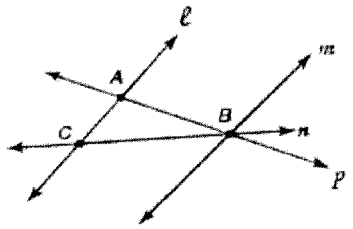
Name: _____ Class: _____ Date: _____ ID: A

Quiz #3 2-5 to 2-8

Short Answer

1. Determine the point of intersection of lines ℓ and p.



2. Complete the following statement. *If AB = BC and A, B, and C are collinear, then B is the* _____ of $\overline{AC}$.

Name the definition, property, postulate, or theorem that justifies each statement.

3. If $x = 2$, then $2 = x$.

4. If $x + 3 = y$, then $x = y - 3$.

5. Determine whether the conjecture is *true* or *false*.

Given: Two planes intersect.
Conjecture: The planes can intersect only at one point.

6. Determine whether the conjecture is *true* or *false*.

Given: Three noncollinear points.
Conjecture: There is eactly one plane.

7. Determine whether the conjecture is *true* or *false*.

Given: Two points lie in a plane.
Conjecture: The entire line containing those points lies in the plane.

Name the definition, property, postulate, or theorem that justifies each statement.

8. If $\overline{DE} \cong \overline{FG}$, then $\overline{FG} \cong \overline{DE}$.

9. If $XY = WZ$, then $XY + TU = WZ + TU$.

10. If $\angle 1$ and $\angle 2$ form a linear pair, then and $m\angle 1 + m\angle 2 = 180$.

11. If $\angle 1$ and $\angle 2$ are vertical angles, then $\angle 1 \cong \angle 2$.

12. If $m\angle A = 5x - 12$, $m\angle B = 2x + 18$, $\angle A$ and $\angle C$ are supplementary, and $\angle B$ and $\angle C$ are supplementary, find x.

13. Fill in the missing steps and justifications for each step in finding the value of x.

Statements	Reasons
1. $4x + 8 = 36$	1.
2.	2. Subtraction Property
3. $4x = 28$	3.
4.	4. Division Property
5. $x = 7$	5.

14. Given: $\overline{SU} \cong \overline{LR}$
$\overline{TU} \cong \overline{LN}$
Prove: $\overline{ST} \cong \overline{NR}$

Proof:

Statements	Reasons
a. $\overline{SU} \cong \overline{LR}$, $\overline{TU} \cong \overline{LN}$	a.
b.	b. Definition of $\cong$ segments
c. SU = ST + TU LR = LN + NR	c.
d. ST + TU = LN + NR	d.
e. ST + LN = LN + NR	e.
f. ST + LN - LN = LN + NR -LN	f.
g.	g. Substitution
h. $\overline{ST} \cong \overline{NR}$	